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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,632

11/21/2003

Victor Verbinski

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EXAMINER

GAGLIARDI, ALBERT J

ART UNIT

PAPER NUMBER

2884

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/717,632

Applicant(s)

VERBINSKI ET AL.

Examiner

Albert J. Gagliardi

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 40-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 40-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Comment on Submissions*

1. This Office Action is responsive to the Amendment and Remarks filed on 11 October 2006.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1-2, 4-5, 40-41 and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armistead *et al.* in view of Negrelli *et al.* (US 4,989,229) and Swift *et al.* (US 6,292,533)

Regarding claim 1, *Armistead* discloses (Figs. 1, 3 and 4) a target object inspection system comprising: a first detector (18) for detecting radiation (col. 5, lines 53-55) from a radiation source (14); a second detector (24) for detecting radiation from the target object; a mobile platform (111, 151) (alternate embodiment of Figs. 3, 4) including the first detector, the

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second detectors (not shown but inherent or obvious in view of the detectors in the embodiment of Fig. 1) and the radiation source (113, 157); and a support frame including a support element connected to the radiation source (113, 157) and the mobile platform (111, 151), wherein the support frame/element is arranged so as to effect passage of the target object between the radiation source (113) and the first and second detector (see generally Figs 1, 3 and 4) and wherein the mobile platform and the target object pass along side one another during inspection, the mobile platform being capable of inspecting a target when the mobile platform is stationary or when the mobile platform is moving (col. 7, line 48 to col. 8, line 8).

Regarding the support element being a deployable boom, although not specifically disclosed by *Armistead*, *Armistead* further discloses that the detection system may take any particular configuration as long as the conveyance provides the requisite support so as to allow for the source and detectors to be held in alignment on opposite sides of the object, and enables the source and detectors to be passed at uniform speeds on the opposite sides of the target object (col. 9, lines 6-18). Regarding the use of a deployable boom those skilled in the art appreciate that mounting x-ray sources on a boom or movable arm is well known and considered typical in the art (see for example *Negrelli* at col. 1, lines 13-18 and at Figs. 1A, 1B). In addition, *Swift* further teaches (Figs. 1, 2) that such deployable booms may also be utilized in mobile inspections system for large target objects such as vehicles and cargo containers (see generally Figs 2 A, B; and col. 1, lines 22-26). As such, it would have been obvious to a person of ordinary skill in the art to modify the system suggested by *Armistead* in view of the teachings of *Negrelli* and *Swift* so as to utilize a configuration employing a source attached to a deployable boom or arm, as is typical in the art, to allow for an inspection method that is able to accommodate a wider variety of shapes and sizes of objects.

Regarding claim 2, *Armistead* discloses that the first detector is a photon (i.e., x-ray) detector.

Regarding claim 4, *Armistead* discloses that the first detector detects radiation from the radiation source (113) after the radiation passes through the target object (see generally Figs. 1, 3, 4).

Regarding claim 5, although *Armistead* identifies the source is an x-ray source, those skilled in the art appreciate that x-ray sources and gamma source are well known as functionally equivalent sources for purpose of generating high energy photons for inspection purposes, and absent some degree of criticality, the substitution of a gamma source for an x-ray source is considered a matter of routine design choice depending on the needs of the application.

Regarding claim 40, in the system suggested by *Armistead*, *Negrelli* and *Swift* as applied above, *Swift* discloses a typical mobile inspection system wherein the support platform is a truck. One skilled in the art would appreciate that such a configuration would have the advantage of more versatility.

Regarding claim 41, in the system suggested by *Armistead*, *Negrelli* and *Swift* as applied above the system the first and second detectors would be in the truck bed with the source attached at the end of the boom.

Regarding claim 43, *Armistead* further discloses the radiation inspection system includes processor receiving first data indicative of the relative velocity of the target so as to allow for the formation of a distortion free image of the target (col. 9, line 48-66).

Regarding claims 44-46, absent some degree of criticality, the particular type of velocity measuring device is considered a matter of routine design choice depending on the needs of the application.

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5. Claims 3, 6, 8, 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Armistead, Negrelli and Swift* as applied above and further in view of *Adams et al.* (US 2004/0256565).

Regarding claim 3, although *Armistead, Negrelli and Swift* as applied above do not specifically disclose the second detector as a neutron detector, *Adams* teaches [0002, 0004], as is otherwise well known, that the use of additional sensing arrangements, such as passive sensing of neutrons for example, in conjunction with radiation imaging devices, allows for more advantageous examination of cargo containers by allowing for detection of radioactive or fissile material. As such, it would have been obvious to further modify the system to include a neutron detector so as to allow for a more versatile system capable of passive sensing of radioactive and fissile material.

Regarding claim 6, although not specifically disclosed, those skilled in the art appreciate that helium based neutron detectors are well known and, absent some degree of criticality, would have been a matter of routine design choice.

Regarding claim 8, *Adams* further discloses that the detection of neutrons can result in an alert (§ 0027). The use of an indicator to signal the presence of an alert would have been an obvious, if not inherent, design choice.

Regarding claim 42, in the system suggested by *Armistead, Negrelli and Swift* and *Adams* as applied above *Adams* discloses that the second detector is a neutron detector [0007]. Regarding the mode of operation as being always on (continuous) capable of being shut off by an operator (intermittent), such modes of operation are well known in the art and would have been obvious design choice depending on the needs of the application. The examiner further notes that the disclosure by *Adams* of the detection of an alert suggests a mode of operation that would

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be continuous. It is additionally noted, however, that *Armistead* further discloses that depending on the results of an initial inspection, additional measuring could be performed with the second detectors, such measuring suggesting an intermittent mode. Such disclosure suggests that either of the two modes would be an obvious design choice depending on the needs of the application.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Armistead*, *Negrelli* and *Swift* as applied above and further in view of *Kubierschky* (US 4,893,015).

Regarding claim 7, *Armistead* generally discloses that the system includes processing electronics for processing signals collected from the detector and calculating an image (col. 5, lines 30-34) and a display responsive to the collected signals and generating a display (col. 5, lines 34-36). Regarding the processing of signals including a counter for discretely counting photons, *Kubierschky* discloses that typical methods for detecting and measuring radiation can include a discrete photon counting mode (col. 1, lines 39-42). *Kubierschky* teaches that an advantage of photon counting is that lower levels of radiation can be detected. Therefore, absent some degree of criticality, it would have been obvious to a person of ordinary skill in the art to specify that the system includes a counter for discretely counting the photons so as to allow for the processing of signals from the radiation detectors in a typical manner that allows for low levels of radiation to be detected.

### ***Response to Arguments***

7. Applicant's arguments filed 5 October 2006 have been fully considered but they are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 10 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Albert J. Gagliardi  
Primary Examiner  
Art Unit 2884

AJG